In the absence of <u>SDS</u> neither the peptide nor the protein showed any antitumor activity. Thus the detergent is probably necessary to form the correct geometrical shape for activity as described by Sloane and Davis Tumor Targeting (1996)  $\underline{2}$ , 322-326. The data utilizing  $P_{16}$  as an antitumor agent against the human breast tumor cell line (MDA 231) are as follows:

	to ANUP
P <sub>16</sub> no SDS	± no Activity
$P_{16} + 0.005\% SDS$	0.04
$P_{16} + 0.02\% SDS$	0.50
$P_{16} + 0.05\% SDS$	0.50

Fraction of the Activity relative

## I Claim:

- 1. The use of the 16 L-amino acid peptide representing the partial N-terminal sequence of the antineoplastic protein (ANUP) as a pharmacologically antitumor agent which kills human tumor cells (using the human breast tumor cell line as a model).
- 2. The sequence of this peptide is: pyroglutamyl-leucinyl-lysinyl-cysteinyl-tyrosinyl-threoninyl-cysteinyl-lysinyl-glutamyl-prolinyl-methioninyl-threoninyl-serinyl-alaninyl-dysteine.
- 3. The use of the detergent sodium dodecyl sulfate to activate the 16 amino acid peptide to a form that kills human tumor cells using the human breast tumor cell line as an example.

